Atty. Docket No. 8062-1023

PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Fumihide NISHIO

Confirmation No. 9947

Serial No. 10/501,671
(PCT/JP03/00339)

PCT/DO/EO

Filed July 16, 2004

HIGH-CONCENTRATION PREPARATION
OF SOLUBLE THROMBOMODULIN

RESPONSE TO NOTIFICATION OF MISSING REQUIREMENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

June 28, 2005

Sir:

In response to the accompanying Notification of Missing Requirements under 35 U.S.C. § 371 mailed March 31, 2005, we enclose herewith the executed Declaration, which was omitted at the time of filing the application. The required 37 C.F.R. § 1.492(e) surcharge was paid at the time of filing the application. Also enclosed is a Supplemental Application Data Sheet.

Attached herewith is a Statement to Support Filing and

Submission in Accordance with 37 C.F.R. §§ 1.821-1.825 with the Sequence Listing in paper and disk formats.

Respectfully submitted,

YOUNG & THOMPSON

Michael Piziali, Reg. No. 46,997
745 South 23rd Street
Arlington, VA 22202
Telephone (703) 521-2297

MP:fb

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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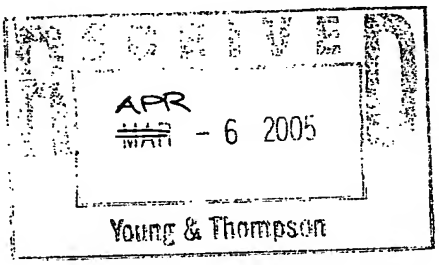
U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/501,671	Fumihide Nishio	8062-1023

INTERNATIONAL APPLICATION NO.	
PCT/JP03/00339	
I.A. FILING DATE	PRIORITY DATE
01/17/2003	01/18/2002

00466
YOUNG & THOMPSON
745 SOUTH 23RD STREET
2ND FLOOR
ARLINGTON, VA 22202



CONFIRMATION NO. 9947

371 FORMALITIES LETTER

OC000000015512526

Date Mailed: 03/31/2005

NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495).

- Copy of the International Application filed on 07/16/2004
- Copy of the International Search Report filed on 07/16/2004
- Copy of IPE Report filed on 07/16/2004
- Preliminary Amendments filed on 07/16/2004
- Information Disclosure Statements filed on 07/16/2004
- Biochemical Sequence Diskette filed on 07/16/2004
- Biochemical Sequence Listing filed on 07/16/2004
- Request for Immediate Examination filed on 07/16/2004
- Copy of references cited in ISR filed on 07/16/2004
- U.S. Basic National Fees filed on 07/16/2004
- Priority Documents filed on 07/16/2004

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date.

- This application clearly fails to comply with the requirements of 37 CFR. 1.821-1.825. Applicant's attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). If the effective filing date is on or after July 1, 1998, see the final rulemaking notice published at 63 FR 29620 (June 1, 1998) and 1211 OG 82 (June 23, 1998). If the effective filing date is on or after September 8, 2000, see the final rulemaking notice published in the Federal Register at 65 FR 54604 (September 8, 2000) and 1238 OG 145 (September 19, 2000). Applicant must provide an initial computer readable form (CRF) copy of the "Sequence Listing", an initial paper or compact disc copy of the "Sequence Listing", as well as an amendment directing its entry into the application. Applicant must also

provide a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d). If applicant desires the sequence listing in the instant application to be identical with that of another application on file in the U.S. Patent and Trademark Office, such request in accordance with 37 CFR 1.821(e) may be submitted in lieu of a new CRF.

- This application does not contain a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d). Applicant must provide such statement. If the effective filing date is on or after September 8, 2000, see the final rulemaking notice published in the Federal Register at 65 FR 54604 (September 8, 2000) and 1238 OG 145 (September 19, 2000).

ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- **For Rules Interpretation, call (571) 272-0951**
- **For Patentin Software Program Help, call Patent EBC at 1-866-217-9197 or directly at 703-305-3028 / 703-308-6845 between the hours of 6 a.m. and 12 midnight, Monday through Friday, EST.**
- **Send e-mail correspondence for Patentin Software Program Help @ ebc@uspto.gov**

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

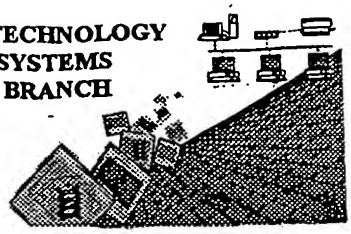
CHRISTINE S WASHINGTON

Telephone: (703) 308-9140 EXT 228

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/501,671	PCT/JP03/00339	8062-1023

FORM PCT/DO/EO/905 (371 Formalities Notice)



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/501,671
Source: PCT/10
Date Processed by STIC: 7/23/04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 4.2 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<**http://www.uspto.gov/ebc/efs/downloads/documents.htm**> , **EFS Submission User Manual** - ePAVE)
2. **U.S. Postal Service:** Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. **Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 06/05/04):** U.S. Patent and Trademark Office, 220 20th Street S., Customer Window, Mail Stop Sequence, Crystal Plaza Two, Lo Room 1B03, Arlington, VA 22202

Revised 05/17/04

Raw Sequence Listing Error Summary

ERROR DETECTED **SUGGESTED CORRECTION** SERIAL NUMBER: 10/501,671

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1	Wrapped Nucleics Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
2	Invalid Line Length	The rules require that a line **not exceed** 72 characters in length. This includes white spaces.
3 ✓	Misaligned Amino Numbering	The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use **space characters**, instead.
4	Non-ASCII	The submitted file was **not** saved in ASCII(DOS) text, as **required** by the Sequence Rules. **Please ensure your subsequent submission is saved in ASCII text.**
5	Variable Length	Sequence(s)____contain n's or Xaa's representing more than one residue. **Per Sequence Rules, each n or Xaa can only represent a single residue.** Please present the **maximum** number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
6	PatentIn 2.0 "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. **This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.**
7	Skipped Sequences (OLD RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for **each** skipped sequence: (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
8	Skipped Sequences (NEW RULES)	Sequence(s) _____ missing. **If intentional**, please insert the following lines for **each** skipped sequence. <210> sequence id number <400> sequence id number 000
9	Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of **n** or **Xaa**, and which residue **n** or **Xaa** represents.
10	Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is **required** when <213> response is Unknown or is Artificial Sequence
11	Use of <220>	Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
12	PatentIn 2.0 "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
13	Misuse of n/Xaa	"n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid

PCT

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/501,671

DATE: 07/23/2004
TIME: 15:23:45

Input Set : A:\PTO.FG.txt
Output Set: N:\CRF4\07232004\J501671.raw

3 <110> APPLICANT: Asahi Kasei Kabushiki Kaisha
W--> 4 <120> TITLE OF INVENTION: High-concentration preparation of soluble thrombomodulin
6 <130> FILE REFERENCE: ASAHI-33
C--> 8 <140> CURRENT APPLICATION NUMBER: US/10/501,671
C--> 8 <141> CURRENT FILING DATE: 2004-07-16
8 <150> PRIOR APPLICATION NUMBER: JP2002-009951
9 <151> PRIOR FILING DATE: 2002-01-18
11 <160> NUMBER OF SEQ ID NOS: 9

pp 1-6

Does Not Comply
Missing Diskette Needed

ERRORED SEQUENCES

13 <210> SEQ ID NO: 1
14 <211> LENGTH: 516
15 <212> TYPE: PRT
16 <213> ORGANISM: Artificial sequence
18 <220> FEATURE:
19 <223> OTHER INFORMATION: Partial amino acid sequence of human-originated soluble
20 thrombomodulin
22 <400> SEQUENCE: 1

misaligned amino acid numbers (see item 3 on Error Summary Sheet)

23 Met Leu Gly Val Leu Val Leu Gly Ala Leu Ala Leu Ala Gly Leu Gly
E--> 24 1 5 ~~5~~ 10 ~~10~~ 15 ~~15~~
25 Phe Pro Ala Pro Ala Glu Pro Gln Pro Gly Gly Ser Gln Cys Val Glu
E--> 26 20 ~~20~~ 25 ~~25~~ 30 ~~30~~
27 His Asp Cys Phe Ala Leu Tyr Pro Gly Pro Ala Thr Phe Leu Asn Ala
E--> 28 35 40 45
29 Ser Gln Ile Cys Asp Gly Leu Arg Gly His Leu Met Thr Val Arg Ser
E--> 30 50 55 60
31 Ser Val Ala Ala Asp Val Ile Ser Leu Leu Leu Asn Gly Asp Gly Gly
E--> 32 65 70 75 80
33 Val Gly Arg Arg Arg Leu Trp Ile Gly Leu Gln Leu Pro Pro Gly Cys
E--> 34 85 90 95
35 Gly Asp Pro Lys Arg Leu Gly Pro Leu Arg Gly Phe Gln Trp Val Thr
E--> 36 100 105 110
37 Gly Asp Asn Asn Thr Ser Tyr Ser Arg Trp Ala Arg Leu Asp Leu Asn
E--> 38 115 120 125
39 Gly Ala Pro Leu Cys Gly Pro Leu Cys Val Ala Val Ser Ala Ala Glu
E--> 40 130 135 140
41 Ala Thr Val Pro Ser Glu Pro Ile Trp Glu Glu Gln Gln Cys Glu Val
E--> 42 145 150 155 160
43 Lys Ala Asp Gly Phe Leu Cys Glu Phe His Phe Pro Ala Thr Cys Arg
E--> 44 165 170 175
45 Pro Leu Ala Val Glu Pro Gly Ala Ala Ala Ala Ala Val Ser Ile Thr

see p. 2

RAW SEQUENCE LISTING DATE: 07/23/2004
PATENT APPLICATION: US/10/501,671 TIME: 15:23:45

Input Set : A:\PTO.FG.txt
Output Set: N:\CRF4\07232004\J501671.raw

same error

```
E--> 46                  180                 185                 190
     47 Tyr Gly Thr Pro Phe Ala Ala Arg Gly Ala Asp Phe Gln Ala Leu Pro
E--> 48           195                 200                 205
     49 Val Gly Ser Ser Ala Ala Val Ala Pro Leu Gly Leu Gln Leu Met Cys
E--> 50      210                 215                 220
     51 Thr Ala Pro Pro Gly Ala Val Gln Gly His Trp Ala Arg Glu Ala Pro
E--> 52 225                 230                 235                 240
     53 Gly Ala Trp Asp Cys Ser Val Glu Asn Gly Gly Cys Glu His Ala Cys
E--> 54                  245                 250                 255
     55 Asn Ala Ile Pro Gly Ala Pro Arg Cys Gln Cys Pro Ala Gly Ala Ala
E--> 56                  260                 265                 270
     57 Leu Gln Ala Asp Gly Arg Ser Cys Thr Ala Ser Ala Thr Gln Ser Cys
E--> 58           275                 280                 285
     59 Asn Asp Leu Cys Glu His Phe Cys Val Pro Asn Pro Asp Gln Pro Gly
E--> 60      290                 295                 300
     61 Ser Tyr Ser Cys Met Cys Glu Thr Gly Tyr Arg Leu Ala Ala Asp Gln
E--> 62 305                 310                 315                 320
     63 His Arg Cys Glu Asp Val Asp Asp Cys Ile Leu Glu Pro Ser Pro Cys
E--> 64                  325                 330                 335
     65 Pro Gln Arg Cys Val Asn Thr Gln Gly Gly Phe Glu Cys His Cys Tyr
E--> 66                  340                 345                 350
     67 Pro Asn Tyr Asp Leu Val Asp Gly Glu Cys Val Glu Pro Val Asp Pro
E--> 68           355                 360                 365
     69 Cys Phe Arg Ala Asn Cys Glu Tyr Gln Cys Gln Pro Leu Asn Gln Thr
E--> 70      370                 375                 380
     71 Ser Tyr Leu Cys Val Cys Ala Glu Gly Phe Ala Pro Ile Pro His Glu
E--> 72 385                 390                 395                 400
     73 Pro His Arg Cys Gln Met Phe Cys Asn Gln Thr Ala Cys Pro Ala Asp
E--> 74                  405                 410                 415
     75 Cys Asp Pro Asn Thr Gln Ala Ser Cys Glu Cys Pro Glu Gly Tyr Ile
E--> 76                  420                 425                 430
     77 Leu Asp Asp Gly Phe Ile Cys Thr Asp Ile Asp Glu Cys Glu Asn Gly
E--> 78           435                 440                 445
     79 Gly Phe Cys Ser Gly Val Cys His Asn Leu Pro Gly Thr Phe Glu Cys
E--> 80      450                 455                 460
     81 Ile Cys Gly Pro Asp Ser Ala Leu Val Arg His Ile Gly Thr Asp Cys
E--> 82 465                 470                 475                 480
     83 Asp Ser Gly Lys Val Asp Gly Gly Asp Ser Gly Ser Gly Glu Pro Pro
E--> 84                  485                 490                 495
     85 Pro Ser Pro Thr Pro Gly Ser Thr Leu Thr Pro Pro Ala Val Gly Leu
E--> 86                  500                 505                 510
     87 Val His Ser Gly
E--> 88           515
     90 <210> SEQ ID NO: 2
     91 <211> LENGTH: 1548
     92 <212> TYPE: DNA
     93 <213> ORGANISM: Artificial sequence
     95 <220> FEATURE:
     96 <223> OTHER INFORMATION: Partial base sequence of human-originated soluble
```

1547 (p.3)

RAW SEQUENCE LISTING DATE: 07/23/2004
PATENT APPLICATION: US/10/501,671 TIME: 15:23:45

Input Set : A:\PTO.FG.txt
Output Set: N:\CRF4\07232004\J501671.raw

97 thrombomodulin gene
99 <400> SEQUENCE: 2
100 atgcttgggg tcctggtcct tggcgcgctg gccctggccg gcctggggtt ccccgcaccc 60
101 gcagagccgc agccgggtgg cagccagtgc gtcgagcacg actgcttcgc gctctacccg 120
102 ggccccgcga ccttcctcaa tgccagtcag atctgcgacg gactgcgggg ccacctaatg 180
103 acagtgcgct cctcggtggc tgccgatgtc atttccttgc tactgaacgg cgacggcggc 240
104 gttggccgcc ggcgcctctg gatcggcctg cagctgccac ccggctgcgg cgaccccaag 300
105 cgcctcgggc ccctgcgcgg cttccagtgg gttacgggag acaacaacac cagctatagc 360
106 aggtgggcac ggctcgacct caatggggct cccctctgcg gcccgttgtg cgtcgctgtc 420
107 tccgctgctg aggccactgt gcccagcgag ccgatctggg aggagcagca gtgcgaagtg 480
108 aaggccgatg gcttcctctg cgagttccac ttcccagcca cctgcaggcc actggctgtg 540
109 gagcccggcg ccgcggctgc cgccgtctcg atcacctacg gcaccccgtt cgcggcccgc 600
110 ggagcggact tccaggcgct gccggtgggc agctccgccg cggtggctcc cctcggctta 660
111 cagctaatgt gcaccgcgcc gcccggagcg gtccaggggc actgggccag ggaggcgccg 720
112 ggcgcttggg actgcagcgt ggagaacggc ggctgcgagc acgcgtgcaa tgcgatccct 780
113 ggggctcccc gctgccagtg cccagccggc gccgccctgc aggcagacgg gcgctcctgc 840
114 accgcatccg cgacgcagtc ctgcaacgac ctctgcgagc acttctgcgt tcccaacccc 900
115 gaccagccgg gctcctactc gtgcatgtgc gagaccggct accggctggc ggccgaccaa 960
116 caccggtgcg aggacgtgga tgactgcata ctggagccca gtccgtgtcc gcagcgctgt 1020
117 gtcaacacac agggtggctt cgagtgccac tgctacccta actacgacct ggtggacggc 1080
118 gagtgtgtgg agcccgtgga cccgtgcttc agagccaact gcgagtacca gtgccagccc 1140
119 ctgaaccaaa ctagctacct ctgcgtctgc gccgagggct tcgcgcccat tccccacgag 1200
120 ccgcacaggt gccagatgtt ttgcaaccag actgcctgtc cagccgactg cgaccccaac 1260
121 acccaggcta gctgtgagtg ccctgaaggc tacatcctgg acgacggttt catctgcacg 1320
122 gacatcgacg agtgcgaaaa cggcggcttc tgctccgggg tgtgccacaa cctccccggt 1380
E--> 123 accttcgagt gcatctgcgg gcccgactcg gccttgtcc gccacattgg caccgac(.)(1440)1439
E--> 124 gactcccggca aggtggacgg tggcgacagc ggctctggcg agcccccgcc cagcccgacg (1500)1499
E--> 125 cccggctcca ccttgactcc tccggccgtg gggctcgtgc attcgggc 1547 (1548)
127 <210> SEQ ID NO: 3
128 <211> LENGTH: 132
129 <212> TYPE: PRT
130 <213> ORGANISM: Artificial sequence
132 <220> FEATURE:
133 <223> OTHER INFORMATION: Partial amino acid sequence of human-originated soluble
134 thrombomodulin
E--> 136 <400> SEQUENCE: 8 (3 ← change to)
137 Met Leu Gly Val Leu Val Leu Gly Ala Leu Ala Leu Ala Gly Leu Gly
E--> 138 1 5 10 15
139 Phe Pro Asp Pro Cys Phe Arg Ala Asn Cys Glu Tyr Gln Cys Gln Pro
E--> 140 20 25 30
141 Leu Asn Gln Thr Ser Tyr Leu Cys Val Cys Ala Glu Gly Phe Ala Pro
E--> 142 35 40 45
143 Ile Pro His Glu Pro His Arg Cys Gln Met Phe Cys Asn Gln Thr Ala
E--> 144 50 55 60
145 Cys Pro Ala Asp Cys Asp Pro Asn Thr Gln Ala Ser Cys Glu Cys Pro
E--> 146 65 70 75 80
147 Glu Gly Tyr Ile Leu Asp Asp Gly Phe Ile Cys Thr Asp Ile Asp Glu
E--> 148 85 90 95
149 Cys Glu Asn Gly Gly Phe Cys Ser Gly Val Cys His Asn Leu Pro Gly

FYI: periods are invalid nucleic acid designa

This is a group of 9 positions, not 10.

misaligned amino acid numbers

all p. 4

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/501,671

DATE: 07/23/2004
TIME: 15:23:45

Input Set : A:\PTO.FG.txt
Output Set: N:\CRF4\07232004\J501671.raw

misaligned numbers

```
E--> 150                   100                 105                 110
     151 Thr Phe Glu Cys Ile Cys Gly Pro Asp Ser Ala Leu Val Arg His Ile
E--> 152           115                 120                 125
     153 Gly Thr Asp Cys
E--> 154      130
     174 <210> SEQ ID NO: 5
     175 <211> LENGTH: 516
     176 <212> TYPE: PRT
     177 <213> ORGANISM: Artificial sequence
     179 <220> FEATURE:
     180 <223> OTHER INFORMATION: Partial amino acid sequence of human-originated soluble
     181       thrombomodulin
     183 <400> SEQUENCE: 5
     184 Met Leu Gly Val Leu Val Leu Gly Ala Leu Ala Leu Ala Gly Leu Gly
E--> 185   1               5                  10                  15
     186 Phe Pro Ala Pro Ala Glu Pro Gln Pro Gly Gly Ser Gln Cys Val Glu
E--> 187                20                  25                  30
     188 His Asp Cys Phe Ala Leu Tyr Pro Gly Pro Ala Thr Phe Leu Asn Ala
E--> 189            35                  40                  45
     190 Ser Gln Ile Cys Asp Gly Leu Arg Gly His Leu Met Thr Val Arg Ser
E--> 191        50                  55                  60
     192 Ser Val Ala Ala Asp Val Ile Ser Leu Leu Leu Asn Gly Asp Gly Gly
E--> 193    65                  70                  75                  80
     194 Val Gly Arg Arg Arg Leu Trp Ile Gly Leu Gln Leu Pro Pro Gly Cys
E--> 195                85                  90                  95
     196 Gly Asp Pro Lys Arg Leu Gly Pro Leu Arg Gly Phe Gln Trp Val Thr
E--> 197            100                 105                 110
     198 Gly Asp Asn Asn Thr Ser Tyr Ser Arg Trp Ala Arg Leu Asp Leu Asn
E--> 199        115                 120                 125
     200 Gly Ala Pro Leu Cys Gly Pro Leu Cys Val Ala Val Ser Ala Ala Glu
E--> 201    130                 135                 140
     202 Ala Thr Val Pro Ser Glu Pro Ile Trp Glu Glu Gln Gln Cys Glu Val
E--> 203145                 150                 155                 160
     204 Lys Ala Asp Gly Phe Leu Cys Glu Phe His Phe Pro Ala Thr Cys Arg
E--> 205                165                 170                 175
     206 Pro Leu Ala Val Glu Pro Gly Ala Ala Ala Ala Ala Val Ser Ile Thr
E--> 207            180                 185                 190
     208 Tyr Gly Thr Pro Phe Ala Ala Arg Gly Ala Asp Phe Gln Ala Leu Pro
E--> 209        195                 200                 205
     210 Val Gly Ser Ser Ala Ala Val Ala Pro Leu Gly Leu Gln Leu Met Cys
E--> 211    210                 215                 220
     212 Thr Ala Pro Pro Gly Ala Val Gln Gly His Trp Ala Arg Glu Ala Pro
E--> 213225                 230                 235                 240
     214 Gly Ala Trp Asp Cys Ser Val Glu Asn Gly Gly Cys Glu His Ala Cys
E--> 215                245                 250                 255
     216 Asn Ala Ile Pro Gly Ala Pro Arg Cys Gln Cys Pro Ala Gly Ala Ala
E--> 217            260                 265                 270
     218 Leu Gln Ala Asp Gly Arg Ser Cys Thr Ala Ser Ala Thr Gln Ser Cys
E--> 219        275                 280                 285
```

misaligned amino acid numbers

p.5

RAW SEQUENCE LISTING DATE: 07/23/2004
PATENT APPLICATION: US/10/501,671 TIME: 15:23:45

Input Set : A:\PTO.FG.txt
Output Set: N:\CRF4\07232004\J501671.raw

same error

```
     220 Asn Asp Leu Cys Glu His Phe Cys Val Pro Asn Pro Asp Gln Pro Gly
E--> 221      290                         295                         300
     222 Ser Tyr Ser Cys Met Cys Glu Thr Gly Tyr Arg Leu Ala Ala Asp Gln
E--> 223 305                         310                         315                 320
     224 His Arg Cys Glu Asp Val Asp Asp Cys Ile Leu Glu Pro Ser Pro Cys
E--> 225                         325                         330                 335
     226 Pro Gln Arg Cys Val Asn Thr Gln Gly Gly Phe Glu Cys His Cys Tyr
E--> 227                     340                         345                 350
     228 Pro Asn Tyr Asp Leu Val Asp Gly Glu Cys Val Glu Pro Val Asp Pro
E--> 229             355                         360                 365
     230 Cys Phe Arg Ala Asn Cys Glu Tyr Gln Cys Gln Pro Leu Asn Gln Thr
E--> 231      370                         375                 380
     232 Ser Tyr Leu Cys Val Cys Ala Glu Gly Phe Ala Pro Ile Pro His Glu
E--> 233 385                         390                         395                 400
     234 Pro His Arg Cys Gln Met Phe Cys Asn Gln Thr Ala Cys Pro Ala Asp
E--> 235                         405                         410                 415
     236 Cys Asp Pro Asn Thr Gln Ala Ser Cys Glu Cys Pro Glu Gly Tyr Ile
E--> 237                     420                         425                 430
     238 Leu Asp Asp Gly Phe Ile Cys Thr Asp Ile Asp Glu Cys Glu Asn Gly
E--> 239             435                         440                 445
     240 Gly Phe Cys Ser Gly Val Cys His Asn Leu Pro Gly Thr Phe Glu Cys
E--> 241      450                         455                 460
     242 Ile Cys Gly Pro Asp Ser Ala Leu Ala Arg His Ile Gly Thr Asp Cys
E--> 243 465                         470                         475                 480
     244 Asp Ser Gly Lys Val Asp Gly Gly Asp Ser Gly Ser Gly Glu Pro Pro
E--> 245                         485                         490                 495
     246 Pro Ser Pro Thr Pro Gly Ser Thr Leu Thr Pro Pro Ala Val Gly Leu
E--> 247                     500                         505                 510
     248 Val His Ser Gly
E--> 249             515
     288 <210> SEQ ID NO: 7
     289 <211> LENGTH: 132
     290 <212> TYPE: PRT
     291 <213> ORGANISM: Artificial sequence
W--> 292 <220> FEATURE:
     293 <223> OTHER INFORMATION: Partial amino acid sequence of human-originated soluble
     294       thrombomodulin
     296 <400> SEQUENCE: 7
     297 Met Leu Gly Val Leu Val Leu Gly Ala Leu Ala Leu Ala Gly Leu Gly
E--> 298   1               5                  10                  15
     299 Phe Pro Asp Pro Cys Phe Arg Ala Asn Cys Glu Tyr Gln Cys Gln Pro
E--> 300             20                  25                  30
     301 Leu Asn Gln Thr Ser Tyr Leu Cys Val Cys Ala Glu Gly Phe Ala Pro
E--> 302          35                  40                  45
     303 Ile Pro His Glu Pro His Arg Cys Gln Met Phe Cys Asn Gln Thr Ala
E--> 304      50                  55                  60
     305 Cys Pro Ala Asp Cys Asp Pro Asn Thr Gln Ala Ser Cys Glu Cys Pro
E--> 306  65                  70                  75                  80
     307 Glu Gly Tyr Ile Leu Asp Asp Gly Phe Ile Cys Thr Asp Ile Asp Glu
```

misaligned amino acid numbers

P.6

RAW SEQUENCE LISTING DATE: 07/23/2004
PATENT APPLICATION: US/10/501,671 TIME: 15:23:45

Input Set : A:\PTO.FG.txt
Output Set: N:\CRF4\07232004\J501671.raw

misaligned amino acid numbers

E--> 308 85 90 95
309 Cys Glu Asn Gly Gly Phe Cys Ser Gly Val Cys His Asn Leu Pro Gly
E--> 310 100 105 110
311 Thr Phe Glu Cys Ile Cys Gly Pro Asp Ser Ala Leu Ala Arg His Ile
E--> 312 115 120 125
313 Gly Thr Asp Cys
E--> 314 130
334 <210> SEQ ID NO: 9
335 <211> LENGTH: 21
336 <212> TYPE: DNA
337 <213> ORGANISM: Artificial sequence
339 <220> FEATURE:
340 <223> OTHER INFORMATION: Synthetic DNA for mutation
342 <400> SEQUENCE: 9
343 aatgtggcgg gcaagggccg a 21
E--> 349 1/12

delete

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 07/23/2004
PATENT APPLICATION: **US/10/501,671** TIME: 15:23:46

Input Set : **A:\PTO.FG.txt**
Output Set: **N:\CRF4\07232004\J501671.raw**

Invalid Line Length:
The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 32
Seq#:3; Line(s) 146
Seq#:4; Line(s) 172
Seq#:7; Line(s) 306
Seq#:8; Line(s) 332

VERIFICATION SUMMARY DATE: 07/23/2004
PATENT APPLICATION: **US/10/501,671** TIME: 15:23:46

Input Set : **A:\PTO.FG.txt**
Output Set: **N:\CRF4\07232004\J501671.raw**

L:4 M:283 W: Missing Blank Line separator; <120> field identifier
L:8 M:270 C: Current Application Number differs, Replaced Current Application No
L:8 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:24 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
M:332 Repeated in SeqNo=1
L:123 M:254 E: No. of Bases conflict, LENGTH:Input:1440 Counted:1439 SEQ:2
L:123 M:320 E: (1) Wrong Nucleic Acid Designator, NUMBER OF INVALID KEYS:1
M:254 Repeated in SeqNo=2
L:125 M:252 E: No. of Seq. differs, <211> LENGTH:Input:1548 Found:1547 SEQ:2
L:136 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:3 differs:8
L:138 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:8
M:332 Repeated in SeqNo=3
L:185 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:5
M:332 Repeated in SeqNo=5
L:292 M:283 W: Missing Blank Line separator, <220> field identifier
L:298 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:7
M:332 Repeated in SeqNo=7
L:349 M:254 E: No. of Bases conflict, LENGTH:Input:12 Counted:22 SEQ:9
L:349 M:320 E: (1) Wrong Nucleic Acid Designator, NUMBER OF INVALID KEYS:2
L:349 M:252 E: No. of Seq. differs, <211> LENGTH:Input:21 Found:22 SEQ:9